

Work Order ID 53593-2

November 9, 2009 12:48:56 PM

SPLIT



Page 1

Item ID: D6005-128

Accept



Setup Start



Revision ID: A

Item Name: Crosstube Material

Stop



Start Date: 11/09/09 Start Qty: 28.00



Cust Item ID:

Required Date: 12/31/09 Req'd Qty: 28.00



Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberReject
NumberInsp.
Stamp

Draw Nbr

Revision Nbr

D6005

Rev A

100



Purchasing

Purchasing

PURCHASING

Memo

0.00

Issue P/O: 10728 a) Order as per Dwg D6005 b) Material: 2.750
 x 0.375 wall 7075-T6/T6511 (WW-T-700/7 or QQ-A-225/9 or QQ-A-200/11)
 seamless aluminum tube c) Minimum ultimate tensile strength = 77 ksi d)
 Minimum tensile yield strength = 66 ksi

09/11/09 28

110



Packaging

Packaging

Receive & Inspect for Damage & Mat'l Certs

0.00

Memo

0.00

Ensure material certification is attached

10/12/2 28

120



QC

Quality Control

QC6- Inspect dimensions to drawing

0.00

Memo

0.00

Ensure Material certification comply to Dwg D6005

10/12/20

10/12/20

Work Order ID 53593

November 9, 2009 12:48:57 PM



Page 2

Item ID: D6005-128

Accept



Setup Start



Revision ID: A

Item Name: Crosstube Material

Stop



Start Date: 11/09/09 Start Qty: 28.00



Cust Item ID:

Required Date: 12/31/09 Req'd Qty: 28.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center ID

130

HandFinish
Hand FinishingOperation
Description

Chemical Conversion Coat per QSI005 4.1

Set Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

0.00

0.00

140

QC
Quality Control

QC3- Inspect Part Finish

Memo

0.00

0.00

150

Packaging
Packaging

Identify as per dwg & Stock Location 46

Memo

0.00

0.00



10-2-8

Work Order ID 53593

November 9, 2009 12:48:57 PM



Page 3

Item ID: D6005-128

Accept



Setup Start



Revision ID: A

Item Name: Crosstube Material

Stop



Start Date: 11/09/09 Start Qty: 28.00



Cust Item ID:

Required Date: 12/31/09 Req'd Qty: 28.00



Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center ID

160

Operation
Description

QC21- Final Inspection - Work Order Release

Set Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberReject
NumberInsp.
Stamp

QC

Quality Control

Memo

0.00

10/09/09 JF
MF
10-2-8

Picklist Print

November 9, 2009 12:48:56 PM

Page 1
1

Work Order ID: 53593



Parent Item: D6005-128RevA



Parent Item Name: Crosstube Material

Start Date: 11/09/09

Required Date: 12/31/09

Comments:

Start Qty: 28.00

Required Qty: 28.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D6005-128PRevA		Purchased		No		110	Each	0.0000	28.0000			

Crosstube material



NF 10-2-08

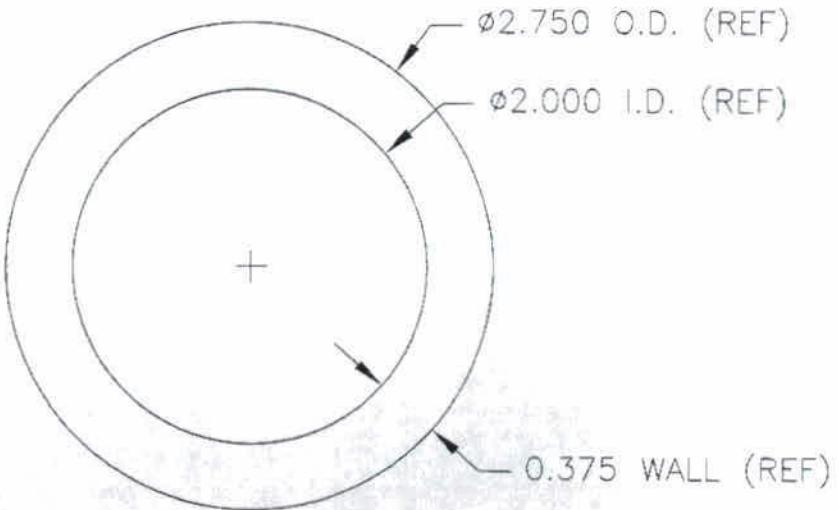


DESIGN	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
CHECKED	APPROVED	DRAWING NO. D6005
DATE		REV. A SHEET 1 OF 1
00.11.17		TITLE CROSSTUBE MATERIAL
A	00.11.17	SCALE 1:1
		NEW ISSUE

W053593

SPECIFICATION CONTROL DRAWING

RELEASED
00.11.24



NOTES

- 1) D6005-XXX CROSSTUBE

LENGTH

WHERE XXX IS LENGTH IN INCHES
EG. 128" LONG TUBE: D6005-128

- 2) MATERIAL: 2.750 OD x 0.375 WALL 7075-T6/T6511 (WW-T-700/7 OR QQ-A-225/9 OR QQ-A-200/11) SEAMLESS ALUMINUM TUBE.
MINIMUM ULTIMATE TENSILE STRENGTH = 77 ksi
MINIMUM YIELD TENSILE STRENGTH = 66 ksi
- 3) TOLERANCES ARE PER ASTM B210 AS FOLLOWS:
O.D.: ± 0.006 MEAN (± 0.012 INCLUDING OVALITY)
WALL: ± 0.015 MEAN (± 0.038 INCLUDING ECCENTRICITY)
LENGTH: XXX $+0.125/-0.000$
STRAIGHTNESS: 0.010" DEVIATION / 12" LENGTH
- 4) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 5) CHEMICAL CONVERSION COAT PER DART QSI 005 4.1

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Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO10728

Purchase Order Date 11/09/09

PO Print Date 11/09/09

Page Number 1 of 2

Order From:

VU-ALU001

ALUMINIUMWERK UNNA AG
UELZENER WEG 36, 59425 UNNA
GERMANY, GERMANY

A rectangular stamp with the word "FAXED" at the top and "16/9/1990" in the center.

Contact Name		Buyer	Chantal Lavoie
Vendor Phone	303 755 5936	Requisition Nbr	
Vendor Fax	303 755 5672	Tax Resale Nbr	10127-2607
Vendor Account Nbr		Terms	Net 30
		Currency	USD
		FOB	

Ship To : DART AEROSPACE LTD 1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Line Nbr	Reference Revision ID	Description/ Mfg ID	Req Date/ Taxable	Req Qty/ Unit of Measure	Ship Method	Unit Price	
	Vendor Part Number						
1	D6005-128P A	Crosstube material	3/05/10 Yes	28.00 Each		\$434.0000	
		Special Inst:	AS PER DWG D6005 REV. A B53593 MATERIAL: 7075-T6/T6511 AS PER WW- T-700/7 OR QQ-A-200/11 SIZE 2.750" X 0.375" WALL SEAMLESS ALUMINUM TUBE MINIMUM ULTIMATE TENSILE STRENGTH = 77 KSI MINIMUM TENSILE YIELD STRENGTH = 66KSI				
2	D6009-129P A	Crosstube Material	3/05/10 Yes	14.00 Each		\$996.0000	

MATERIAL CERTIFICATION
REQ'D UPON DELIVERY

2

No substitution or deviation without
consent.
Certificate of Conformity or M_C
Certification required when appro-



Packinglist ALUnna AG

ALUMINA ref. no.	34210/1
Customer PO.	PO. 10728
Date:	01.07.10

We hereby declare that the wooden packing material are totally free from bark and apparently

free from live plant pests

Abnahmeprüfzeugnis 3.1 - EN 10204:2004

Inspection Certificate 3.1 - EN 10204:2004 / Certificat de Reception 3.1- EN 10204:2004

Kunde:	Dart Aerospace Ltd.		Zeugnisnummer:	1173/09									
Client:	1270 Aberdeen Street K6A1K7 Hawkesbury, ON Canada		Cert No.: / No. du certificat:	PO 10728									
Produkt:	Rohre nahtlos gepresst <i>Tubes seamless extruded</i>		Bestellnummer:	Order No. / No. de commande									
Product / Produit:			Auftrag:	34210/1									
Spezifikation:	AMS - QQ - A - 200/11E; Spezifikation Dart Aerospace 6005		Our Reference/Notre Reference:										
Specification:													
Werkstoff:	7075	Zustand:	T 6511										
Alloy/Alliage:		Temper/État:											
Abmessung	2,750 INCH x 2,000 INCH x 0,375 INCH x 128,000 INCH												
Size / Dimension	D6005-128 2.750 x 0.375 x 128												
Kennzeichnung	ALUnna - Cert No. 1173/09 - 7075 - T 6511 - Cast No. 82335 - AMS QQA 200/11 - 2.750" OD X 0.375" Wall - Heat Lot No. 400254 - ALUnna Order Conf. No. 34210/1-1 PO. 10728												
Marking/Marquage:													
Lieferung	25	lbs	Country of Manufacture: Germany										
Delivered Material / Matériel délivré:	908		Products are in accordance with applicable RoHS										
1. Chemische Analyse			Chemical Analysis / analyse chimique										
Charge/ Cast No.	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Pb	Zr	Bl	Sn	Ni
min.				1,2		2,1	0,18	5,1					
max.	0,40	0,50		2,0	0,30	2,9	0,28	6,1	0,20				
82335	0,08	0,16	1,4	0,05	2,49	0,21		5,8	0,04	0,01	0,02	0,01	0,01
Hydrogen content:<0,10			ccm/100 g Al			Elements without indication < 0,01 %			country of melt manufacturer: Germany				
2. Mechanische Eigenschaften			Mechanical Properties / Valeurs Mécaniques										
Anforderungen Requirements	tensile (Rm) ksi		yield (Rp0,2) ksi		elongation 2" %		elongation A %		Hardness HB		Heat Lot No.		
	min. max.	77,0		66,0									
1	86,130		78,880		11,0						400254 - 25 pcs.		
<i>8/10/05</i>													

RMS outside 25 - max. 11,7 μ "

Ergebnis der Prüfungen: Es wird bestätigt, daß die Lieferung geprüft wurde und den Vereinbarungen bei der Bestellannahme entspricht

Test results: We confirm that the delivery has been tested and applies to the agreements made on receipt of the order

Resultats: Nous confirmons que la livraison a été contrôlée et correspond avec les conventions faites à la réception de la commande